It’s All a Matter of Degrees: Comparing Survey and Administrative Educational Attainment Data

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Motivation

• The returns to education literature is large and extensive
• Many of these papers are based on survey data, and there have been limited efforts to measure how accurate the responses are to education questions.
• Plenty of work by done on other survey responses has found misreporting:
  • Meyer et al. (2015) shows that it is very prevalent in income assistance programs
• Since the ACS added the field of study question, several papers have attempted to estimate returns by field of study, with no sense of accuracy of reporting.
Contributions

• First paper to assess quality of field of study responses
• First paper to assess quality of education level responses at a large scale
• Ability to measure how these errors change over time, and how they differ by race/ethnicity and gender
Data

**Degree Data**
- Data are from Texas; Pennsylvania State University System; Ohio; SUNY; CUNY; Colorado
- Data report degree earned, degree field, date of graduation, institution
- Restrict to bachelor's degrees (future work is going to look at other degree levels)
- Degrees earned from 2001-2015.

**American Community Survey**
- Data from 2009-2016
- Focusing on the questions of highest educational attainment and field of study for bachelor’s recipients.

We merge these two data sets for a 10% sample, and focus only on responses in the ACS that are taken in years after the graduation year (to ensure the respondent has received a degree)
Measuring Survey Misreporting

ACS Respondents are asked: What is the highest degree or level of school you have COMPLETED?

We combine these responses into four categories of responses for simplicity:

• High school dropout or below
• High school graduate
• Some college
• Bachelors or above

In our setting, since our sample only includes Bachelors recipients, the only “correct” answer is the fourth category, and we can only measure underreporting.
First Finding: If Response Given, High Quality
Second Finding: Differences in Impute Quality by Race

Accuracy, by Race

White, Non-Hispanic
N = 1100

Black, Non-Hispanic
N = 150

Hispanic
N = 250
Third Finding: Conditional on Reporting, Differences in Response Quality by Race

Share Misreported Non-Imputed by Race

- **White**
- **Black**
- **Hispanic**

Year:
- 2008
- 2010
- 2012
- 2014
- 2016
Fourth Finding: Impute Rates increased a lot in 2013
Measuring Survey Misreporting II

• We also look at the question of field of study in the ACS, and compare it administrative records.
Fifth Finding: Field of Study Mostly Reported Accurately
Field of Study Reporting Accuracy Does Not Change over Time
Conclusions

• 5-10% of ACS respondents under-report educational attainment, but about half of this error is driven by the imputation procedure.

• Misreporting and imputation rates differ significantly by race/ethnicity

• Imputation rates increase significantly in 2013, mostly due to internet and cuts to FEFU

• 20% of respondents incorrectly report field of study
Future Work

• Particularly for field of study, we want to see how misreporting may affect empirical estimates in several recent papers
• We also want to look at over-reporting, which we see for some select group of respondents
• Measure misreporting in NSCG, which should provide more accurate responses since it is more intensive.